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journal or publication title	Bulletin of the Toyama Science Museum
number	7
page range	51-69
year	1985-03-20
URL	http://repo.tsm.toyama.toyama.jp/?action=repository_uri&item_id=509

Some Isopod Crustaceans collected in the middle coastal area of the Japan Sea*

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日本海沿岸から採集された数種の等脚目甲殻類

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1981～1984年に、日本海区水産研究所が、日本海沿岸海域において行った流れ藻調査をはじめとする一連の調査の際に採集された等脚目甲殻類の標本、及び同海域から採集された、それ以外の若干の等脚目甲殻類の標本を検索し、2種の新種を含む8種を同定したので報告する。

Family Cirolanidae	スナホリムシ科
<i>Eurydice longiantennata</i> n. sp.	ヒゲナガスナホリムシ(新称)
Family Cymothoidae	ウオノエ科
<i>Lironeca</i> sp. 1	
<i>Lironeca</i> sp. 2	
Family Sphaeromatidae	コツブムシ科
<i>Cymodoce</i> sp., aff. <i>acuta</i> RICHARDSON, 1904	
<i>Holotelson decoratus</i> n. sp.	カザリウミセミ(新称)
Family Idoteidae	ヘラムシ科
<i>Idotea</i> sp.	
<i>Euidotea ocellata</i> NUNOMURA, 1984	オオメヘラムシ
<i>Cleantiella</i> sp.	

なお、これらの調査で得られた全種のリストや分布状況、生態学的事項は別途報告する予定である。

Some isopod crustaceans were collected, when several survey cruises on the biomass of floating seaweeds were carried out in the middle coastal area of the Japan Sea, in 1981～1984, by the Japan Sea Regional Fisheries Research Laboratory.

* Contributions from the Toyama Science Museum, No. 46

These specimens collected from the floating seaweeds were identified. Adding to these specimens, some isopod specimens collected in the middle part of the Japan Sea were also identified.

The present paper deals with the morphological aspect of the important 8 kinds of species including 2 new species of collected samples. And whole list of species collected from the survey cruise and the ecological characteristics will be reported in the next paper later published.

Family Cirolanidae

***Eurydice longiantennata* n. sp.**

(Japanese name : Higenaga-sunahorimushi, new)

(Figs. 1~2)

Description : Body elongated, 3.1 times as long as wide. Body up to 5.0mm in length. Colour

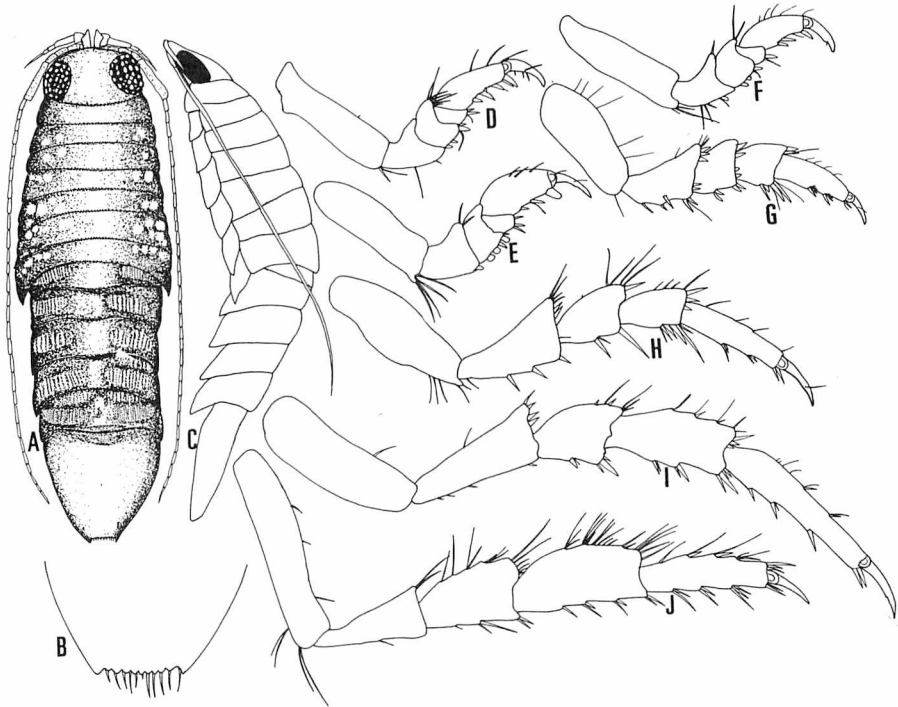


Fig. 1. *Eurydice longiantennata* n. sp.

A. Dorsal view ; B. Posterior part of pleotelson ; C. Lateral view ; D-J. Pereopods I -VII. (All : holotype male).

almost brown with irregular paler patterns in alcohol. Dorsal surface smooth. Cephalon almost round. Eyes well developed, each composed of 35 ommatidia. Peraeal somites becomes wider towards the posterior ones; lateral margins of peraeal somites well developed. Pleon long, occupying about 35% of total length and almost as long as peraeon. Lateral margins of pleonites almost straight. Pleotelson (Fig. 1B) greatest width almost as long as wide. Posterior margin narrow, about 1/4 of the width of pleotelson, deeply indented with 11 small teeth and 11 setae.

Frontal lamina (Fig. 2B) small and triangular. Clypeus short. First antenna (Fig. 2A) short, not extending beyond cephalon; 1st segment big and rectangular; 2nd segment short;

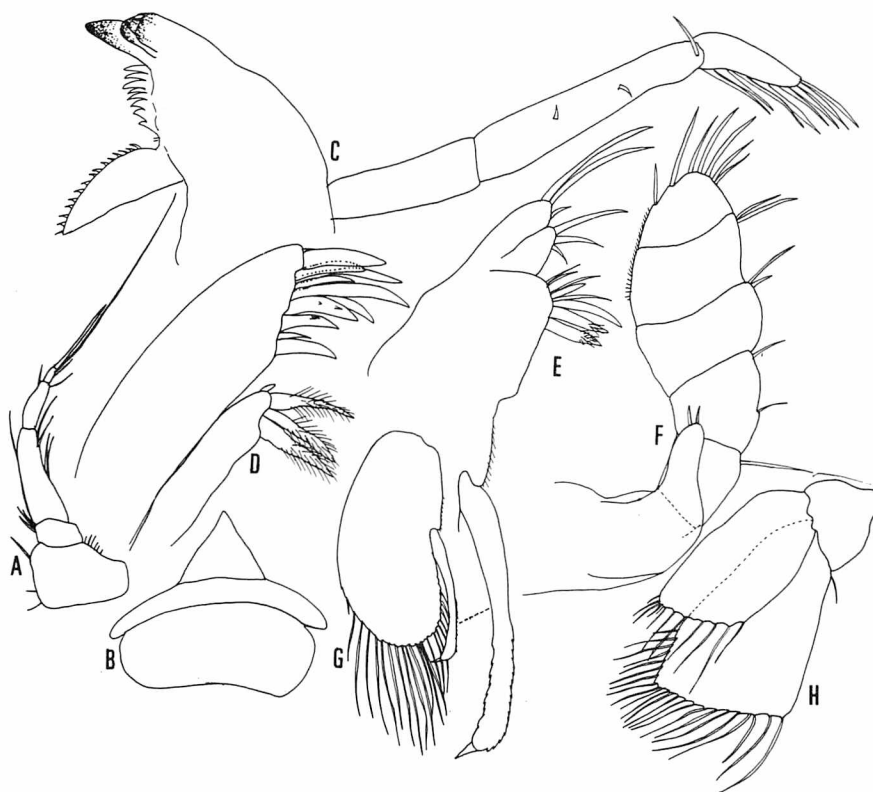


Fig. 2 *Eurydice longiantennata* n. sp.

A. First antenna; B. Frontal lamina and clypeus; C. Right mandible; D. First maxilla; E. Second maxilla; F. Maxilliped; G. Pleopod II; H. Uropod (A, D, F–H: holotype male, B–C, E: paratype male).

3rd segment longest; 4th segment rectangular; 5th segment small with 2 long setae. Second antenna long, reaching the posterior part of pleotelson, composed of 5 peduncular and 31 flagellar segments.

Mandible (Fig. 2C); pars incisiva 4-toothed; lacinia mobilis consisting of about 7 setae; processus molaris normal; palp long, terminal segment with 8 setae on inner margin. First maxilla (Fig. 2D) with outer ramus bearing 10 recurved spines at the tip; inner ramus bearing 3 fringed setae at the tip. Second maxilla (Fig. 2E); 2 fringed and 6 simple setae on inner ramus; both lobes of outer ramus with 3 setae. Maxilliped (Fig. 2F); terminal palpal segment semicircular with 7 setae; other segments almost square; endite small with 2 terminal setae.

Peraeopods I-III (Fig. 1D-F) slender; basis long; ischium almost triangular; merus rather short; carpus short and triangular; propodus with 5 stout setae. Peraeopods IV (Fig. 1G) a little longer than the peraeopods I-III; basis rectangular; ischium increasing towards the distal margin; merus and carpus almost square; propodus with 2 groups of 3 setae. Peraeopods V-VII (Fig. 1H-J) much longer than the preceding 4 peraeopods; basis oblong; ischium increasing towards the distal margin; merus and carpus rectangular; propodus elongated. All the peraeopods uni-ungulate.

Male second pleopod (Fig. 2G) with copulatory stylet articulating at the centre of inner margin, which is slightly exceeding the posterior margin of endopod and is recurving slightly inwards, bears sinuate margins and a stout spine at the tip.

Uropod (Fig. 2H); basis triangular; exopod rectangular and narrow; endopod rectangular, about 1.5 times as long as exopod, but not extending posterior margin of the pleopod.

Female—There is no noticeable difference between both sexes.

Remarks: The present new species is most closely allied to *Eurydice nipponica* BRUCE and JONES collected from southern Japan, but the former is separated from the latter in the following features: (1) shape of 1st antenna, (2) absence of plication of 1st antenna, (3) longer and more numerous segmented flagellum of 2nd antenna, (4) longer cephalon and (5) shape of posterior end of pleotelson.

Material examined: More than 200 specimens including 1 ♂ (holotype, 5.0 mm in body length), 1 ♀ (allotype 4.4 mm in body length) and 21 paratypes, from Tobishima, Sakata City, Yamagata Pref. coll. Masaki SATO, June 9, 1983. Type series is deposited as follows: holotype (TOYA-Cr-3781), allotype (TOYA-Cr-3782) and 9 paratypes (TOYA-Cr-3783~3791) at the Toyama Science Museum, 4 paratypes (OMNH-Ar-2942~2945) at the Osaka Museum of Natural History, 4 paratypes (NSMT-Cr-9019) at the National Science Museum, Tokyo and 4 paratypes (YCM-CI-881~884) at the Yokosuka City Museum.

Family Cymothoidae

***Lironeca* sp. 1**

(Fig. 3)

Description : Female — Body fusiform, 2.6 times as long as wide. Body up to 6.4 mm in length. Colour pale brown in alcohol. Dorsal surface smooth. Cephalon triangular; anterior margin slightly protruded forwards; posterior margin almost straight. Peraeon fusiform,

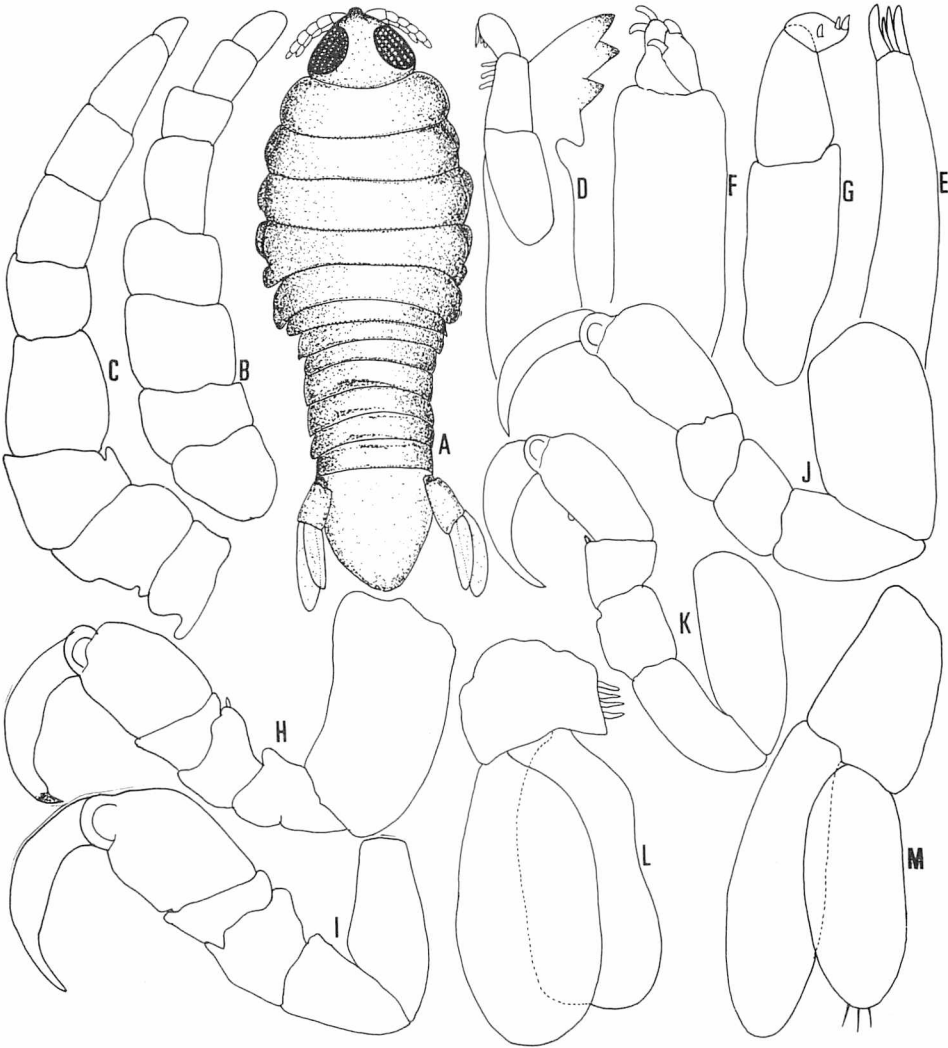


Fig. 3. *Lironeca* sp. 1

A. Dorsal view ; B. First antenna ; C. Second antenna ; D. Mandible ; E. First maxilla ; F. Second maxilla ; G. Maxilliped ; H-I. Peraeopods I - II ; J-K. Peraeopods VI-VII ; L. Pleopod I ; M. Uropod. (All : female specimen).

and is widest at 3rd peraeonal somite. All the pleonal somites subequal in width and length and not abruptly narrower than the peraeon. Pleotelson semicircular and last 2 segments smaller than the others.

Peraeon fusiform, and is widest at 3rd peraeonal somite. All the pleonal somites subequal in width and length and not abruptly narrower than the peraeon. Pleotelson semicircular and last two segments smaller than the others.

First antenna (Fig. 3B) composed of 8 segments, each almost square and subequal in length. Second antenna (Fig. 3C), a little longer than the 1st, composed of 9 segments.

Eyes big, each composed of about 90 ommatidia.

Mandible (Fig. 3D) as figured. First maxilla (fig. 3F) with 4 terminal teeth. Second maxilla (Fig. 3G) with 2 spines on inner ramus and 2 spines on outer ramus. Maxilliped (Fig. 3H) with 2 terminal and a subterminal spines.

All the peraeopods (Fig. 3H-K) subequal in shape; basis stout and rectangular; ischium triangular; merus and carpus rather short; propodus robust; dactylus long and recurving inwards.

Pleopods I - V (Fig. 3M) without seta on the border and not characteristic in female. Uropod (Fig. 3N); basis trapezoidal in shape, both rami lanceolate.

Remarks : These specimens a little resemble *Lironeca tenuistylis* (RICHARDSON) from Fox Bay, Colon and Panama. But as these specimens seem to be still juvenile, species name could not be determined.

Material examined : 1 ♀, from floating weeds, off Akadomari, Sado, lat. 37°56' N; long. 137°50' E, coll. K. IKEHARA *et al.* June, 1981 and 1 ♀, from floating weeds, off Hamochi-machi, Sado, lat. 37°51.41' N; 138°28.9' E, coll. K. IKEHARA *et al.*, June 27, 1981.

Lironeca sp.2

(Figs. 4~5)

Description : *Male* — Body almost rectangular, 3.2 times as long as wide. Body 7.5 mm in length. Colour dull yellow in alcohol. Dorsal surface smooth. Cephalon triangular with a low and flat projection in the top and posterior margin almost straight. Eyes big and reniform, each eye composed of 80 ommatidia. Peraeon a little swollen and widest in the peraeonal somite III. Pleonal somites I - V almost parallel and subequal in length. Both rami of uropod exceedingly beyond the pleotelson.

First antenna (Fig. 4B) composed of 7 segments; 3rd and 4th segments with 3~5 plumose setae. Second antenna (Fig. 4C) a little longer than the 1st and composed of 8 segments; all the segments square and subequal in length; 4th to 8th segments with several setae.

Mandible (Fig. 4D) as figured; palp 3-segmented; terminal segment with 6 teeth on apical margin. First maxilla (Fig. 4E) slender, with 4 terminal teeth. Second maxilla (Fig. 4F) with 2 terminal and a subterminal spines. Maxilliped (Fig. 4G) with 2 terminal and a subterminal recurved spines.

Peraeopod I (Fig. 5A); basis robust; ischium rectangular; merus and carpus rather short; propodus robust; dactylus long and recurved inwards. Peraeopods II and III (Fig. 5B and C) similar in shape and longer than the peraeopod I; basis rectangular and big; ischium rectangular; merus almost square; carpus short; propodus rectangular with 3 teeth; dactylus long and recurving inwards with many small denticles on inner margin. Peraeopods IV-VI (Fig. 5 D-F) similar in shape; basis rectangular; ischium rectangular but shorter than basis; merus and carpus almost square but carpus a little shorter than merus; propodus rectangular; dactylus long. Peraeopod VII (Fig. 5G) longer than the preceding peraeopods; basis oblong; ischium also oblong but narrower than basis; merus and carpus almost square; propodus rectangular with 3 denticles on inner margin; dactylus long.

Male second pleopod (Fig. 4H); basis rectangular with 5 retinacula on inner margin; exopod lanceolate with about 30 setae on inner margin; endopod rectangular and increasing towards the distal margin and with a shallow dent on distal margin; copulatory stylus, articulating at the basal part of endopod, club-shaped and a little shorter than endopod.

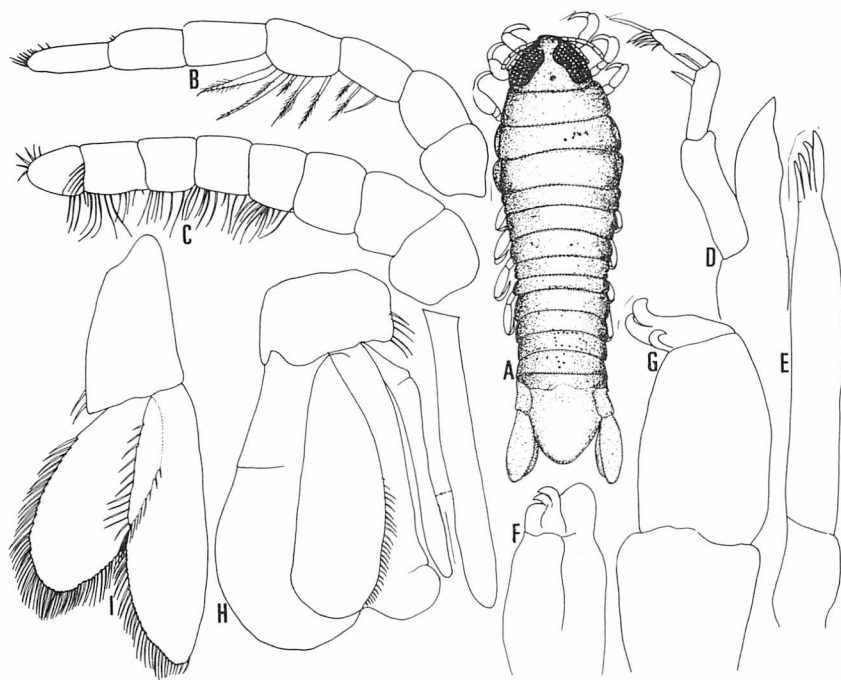


Fig. 4. *Lironeca* sp. 2

A. Dorsal view; B. First antenna; C. Second antenna; D. Mandible; E. First maxilla; F. Second maxilla; G. Maxilliped; H. Pleopod II; I. Uropod (All: male specimen).

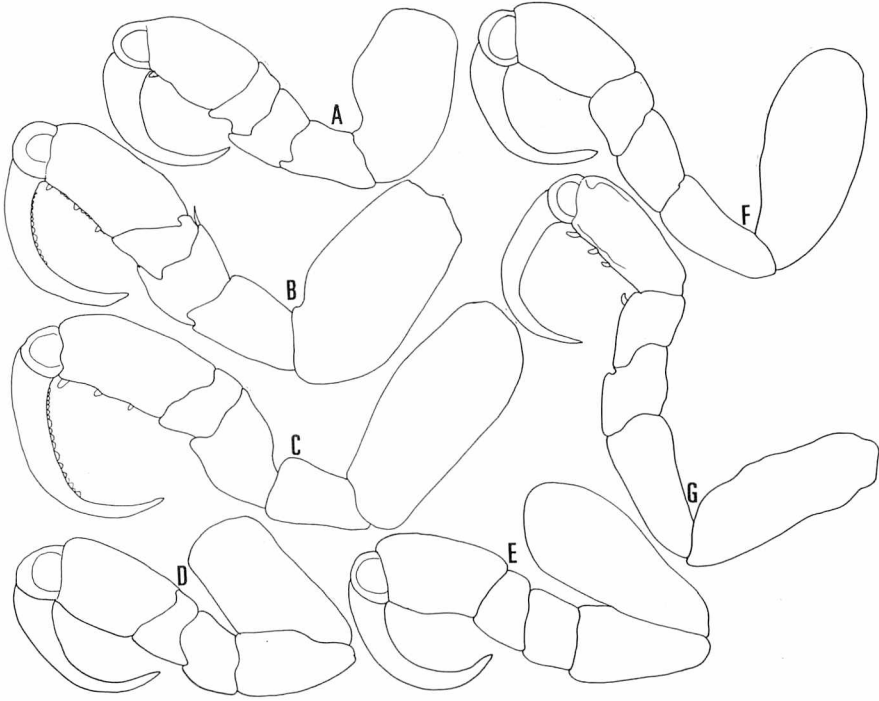


Fig. 5. *Lironeca* sp. 2

A-G. Peraeopods I-VII, (All : male specimen).

Uropod (Fig. 4I); basis pentagonal; each ramus fringed with many setae and lanceolate in shape; outer ramus longer than the inner one.

Remarks: The present specimen seems to be belonging to the genus *Lironeca*. But, because this specimen is still juvenile and only a single specimen was available to us, species name could not be determined.

Material examined: 1 juvenile ♂, floating weeds, off Ogi, Uchiura-chô, Ishikawa Pref. lat. 37°54.3'N; long. 137°18.0'E, coll. K. IKEHARA *et al.* Aug. 5, 1982.

Family Sphaeromatidae

***Cymodoce* sp., aff. *acuta* RICHARDSON, 1904**

(Fig. 6)

Description: Male — Body ovate-lanceolate, about 2.4 times as long as wide. Body length up to 13 mm. Colour dull yellow in alcohol. Dorsal surface with small tubercles. Cephalon rather short, with a pair of posterolateral projections. Peraeonal somite I about 1.5 times longer than peraeonal somite II. Peraeonal somites II-VII subequal length. Pleonal somites I-III partly indicated. Pleotelson bearing a pair of projections and a medial projection, both protruded posteriorly. Eyes mediocre in size, each with about 230 ommatidia.

First antenna (Fig. 6B), reaching the posterior margin of cephalon. Peduncle 3-segmented; basal segment broad and indurate; 2nd segment small and pentagonal; 3rd segment rectangular, about 3.5 times as long as wide. Flagellum 4-segmented.

Second antenna (Fig. 6C), reaching the 3rd peraeonal somite, composed of 5 peduncular segments and 15 flagellar segments.

Left mandible (Fig. 6D); pars incisiva composed of slightly 2-toothed; lacinia mobilis also 2-toothed; processus molaris moderate in size; 2 palpal segment with 8 setae and terminal segment bearing 14 segments. First maxilla (Fig. 6E); inner ramus with 4 fringed setae on mediodistal margin; inner lobe of outer ramus with about a dozen setae on distal margin; outer lobe of outer ramus with 6 longer setae on distal margin. Maxilliped (Fig. 6G); endite rectangular with a single coupling hook and 10 short fringed setae on distal margin; palp 5-segmented; 2nd to 4th segments with each mediodistal setose lobe; terminal segment slender setose.

Peraeopod I (Fig. 6H): basis and ischium rectangular; merus almost square; carpus short and triangular; propodus robust; dactylus bifid. Peraeopods II-III (Fig. 6 I -J); basis and ischium rectangular; merus and carpus almost square; propodus rectangular; dactylus bifid. Peraeopods IV-VII (Fig. 6K); basis elongated, 6 times as long as wide; ischium, merus carpus and propodus elongated; dactylus bifid.

Penes (Fig. 6L) slender and elongated, separated perfectly.

Male second pleopod (Fig. 6 M); basis with 2 retinacula; endopod triangular; copulatory stylet long and articulating at the base of inner margin of endopod; exopod rectangular.

Uropod; basis almost square; inner ramus rectangular; outer ramus rectangular but a little shorter than inner ramus.

Remarks: The present specimens agree well with the original description of *Cymodoce acuta* RICHARDSON but some differences are found: (1) shape of the posterior margin of 3rd pleonal somite, (2) less numerous segmentation of 1st antenna, (3) less numerous setae on outer ramus of 1st maxilla, (4) indistinct coxal plates of peraeonal somites and (5) shape of 7th of peraeonal somite.

Material examined: 4 ♂♂, Tobishima Island, Sakata City, Yamagata Pref., coll. Masaki SATO, May 23, 1984

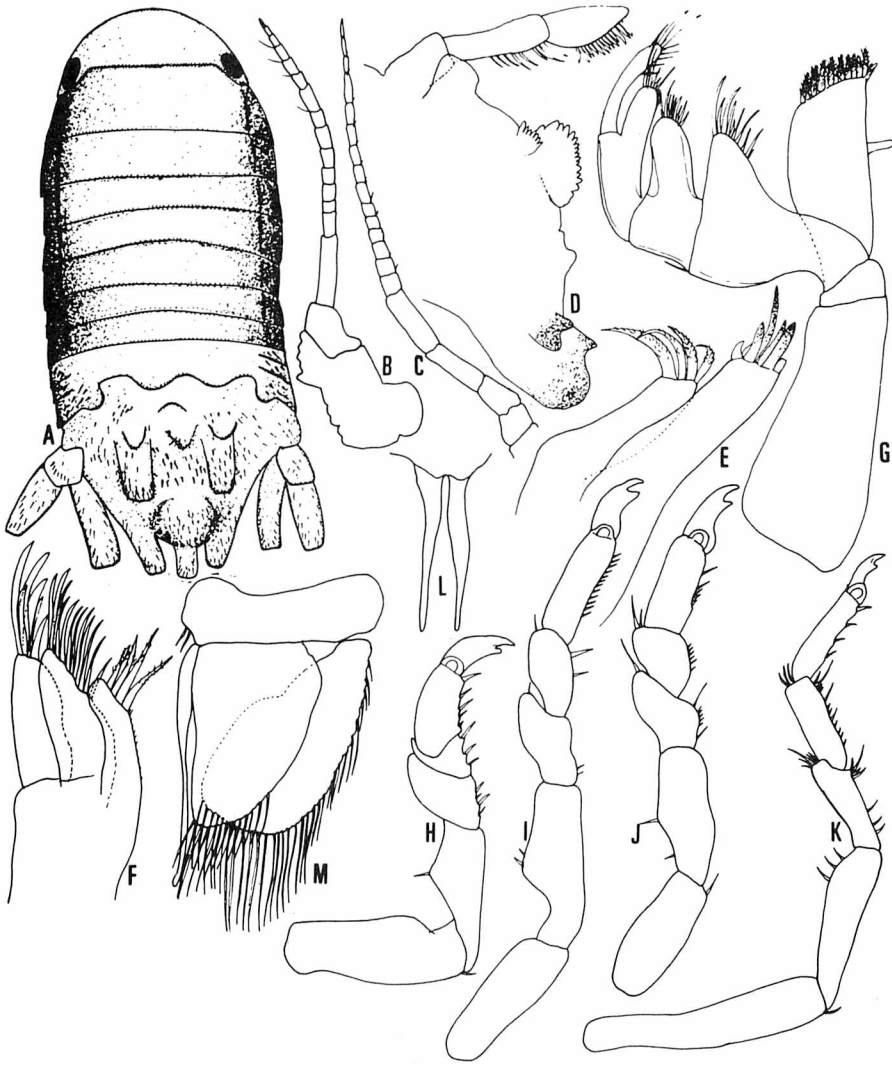


Fig. 6. *Cymodoce* sp., aff. *acuta* RICHARDSON

A. Dorsal view ; B. First antenna ; C. Second antenna ; D. Left mandible ; E. First maxilla ; F. Second maxilla ; G. Maxilliped ; H-J. Peraeopods I -III ; K. Peraeopod VII L. Penes ; M. Pleopod II (All : male specimen).

***Holotelson decoratus* n. sp.**

(Jap. name: Kazari-umisemi, new)

(Fig. 7~8)

Description: Male — Body round, 2.1 times as long as wide. Body length up to 7.1 mm. Colour dull yellow in alcohol. Dorsal surface with many small tubercles. Cephalon semicircular, posterolateral part slightly protruded. Eyes mediocre, each eye composed of 90 ommatidia. First peraeonal somite about twice as long as wide. Second to 6th paraeonal somites subequal in length. Seventh peraeonal somite rather long and with 4 pairs of projections protruded posteriorly; medial projection is biggest of all. Coxal plates of peraeonal somites indicated but rather small. Pleon consisting of 3 anterior fused pleonites articulating with pleotelson free posterior margin of pleonites with 3 weak lateral emarginations. Pleotelson with many conical tubercles and a relatively large process on hind medial line.

Frontal lamina (Fig. 7D) low and pentagonal. Clypeus round. First antenna (Fig. 7B), reaching level of posterior margin of cephalon; flagellum 10-segmented. Second antenna (Fig. 7C), reaching posterior margin of 2nd peraeonal somite; flagellum 12-segmented.

Right mandible (Fig. 7F); pars incisiva single-toothed; lacinia mobilis not chitinized and weakly dentated processus molaris rather small. Left mandible almost similar to the right one. First maxilla (Fig. 7 F and G); outer ramus with 10~11 strong teeth at the distal end, 2~3 of which dentated; inner ramus with 4 elongated fringed setae. Second maxilla (Fig. 7H); inner ramus with 9 setae, 2 lobes of outer ramus with 8 and 7 setae respectively. Maxilliped (Fig. 7 I); endite with about 10 rather short setae, 6 of which circumplumose setae, and a coupling hook on inner margin; palp 5-segmented; segments II-IV mediodistal setose lobe, terminal segment slender and setose.

Peraeopod I (Fig. 8A) short; basis increasing forwards the distal margin; ischium rectangular; merus almost round; carpus triangular; propodus rather robust. Peraeopods II-VII (Fig. 8 B and C) similar in shape and longer than the peraeopod I; basis increasing towards the distal end; ischium rectangular; merus and carpus rectangular; propodus rather short.

Penes (Fig. 8D) rather short.

Pleopod I (Fig. 8E); basis with 3 retinacula; endopod almost triangular; exopod rectangular. Pleopod II (Fig. 8F); basis with 2 retinacula; endopod semicircular with copulatory stylet, articulating at basal part, club-shaped; exopod rectangular. Pleopod III (Fig. 8G); basis with retinacula; endopod triangular; exopod ellipsoidal, with a transverse suture in distal third. Pleopod VI (Fig. 8H); both rami pleated and triangular. Pleopod V (Fig. 8I); both rami pleated; exopod ellipsoidal, with a spinulose boss at the tip; endopod rectangular. Uropod (Fig. 8J); both rami lanceolate and with sinuate margins, exopod broader than endopod.

Remarks: The present new species seems to occupy a rather peculiar position and is

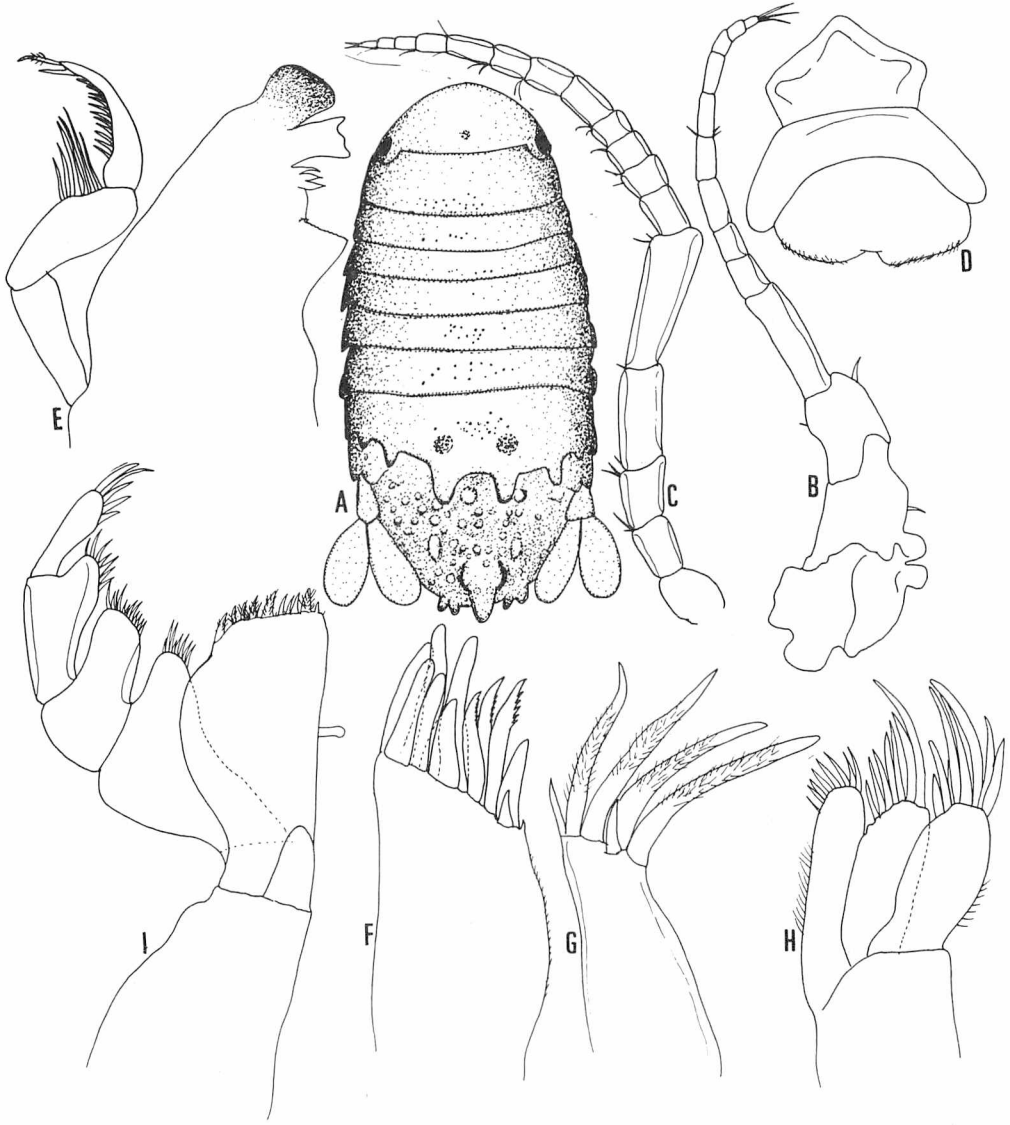


Fig. 7 *Holotelson decoratus* n. sp.

A. Dorsal view ; B. First antenna ; C. Second antenna ; D. Frontal lamina and clypeus ; E. Right mandible ; F. Outer ramus of first maxilla ; G. Inner ramus of the same ; H. Second maxilla ; I. Maxilliped (A-C. E-I : holotype male, D : paratype).

separated from the another species, *Holotelson tuberculatus* RICHARDSON from Japan in the following features: (1) less clearly indicated pleonal somites, (2) shape of pleotelson,

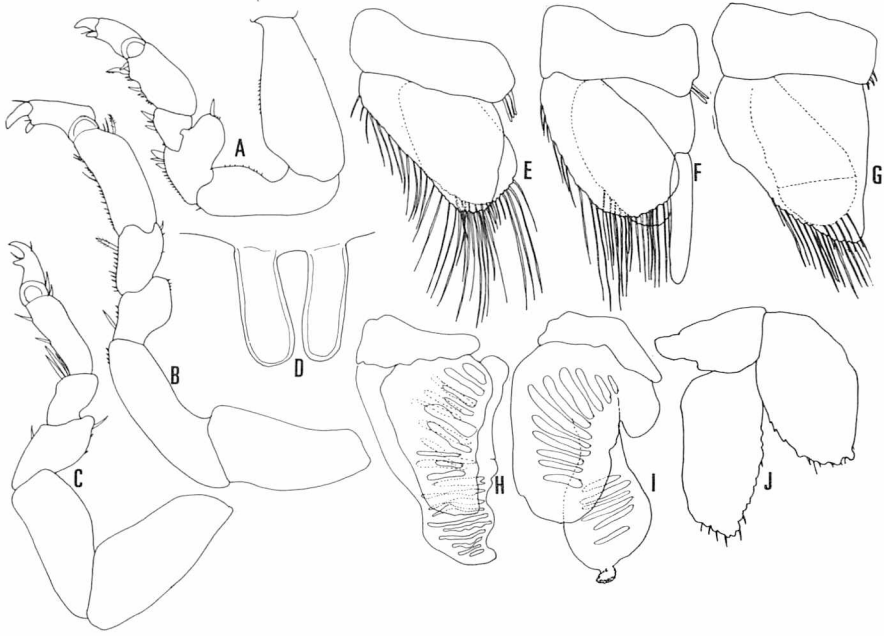


Fig. 8. *Holotelson decoratus* n. sp.

A. Peraeopod I; B. Peraeopod III; C. Peraeopod VII; D. Penes; E-I. Pleopods I - V; J. Uropod. (All; nontype male)

especially more numerous tubercles on it, (3) less numerous segmentation of 1st antenna and (4) shape of 7th peraeonal somite, especially number and shape of tubercles. Regrettably no female specimen has been collected so far.

Material examined : 10 ♂♂ (1 ♂, holotype, 7.1mm in body length and 9 ♂♂, paratypes, up to 7.0 mm in body length), Tobishima Island, Sakata City, Yamagata Pref. coll. Masaki Sato, May 23, 1984. Type series is deposited as follows: holotype (TOYA-Cr-3861) and 6 paratypes (TOYA-Cr-3862~3867) at the Toyama Science Museum, 1 paratype (OMNH-Ar-2946) at the Osaka Museum of Natural History, 1 paratype (NSMT-Cr-9020) at the National Science Museum, Tokyo, and 1 paratype (YCM-CI-880) at the Yokosuka City Museum.

Family Idoteidae

Idotea sp.

(Fig. 9)

Description : *Female* — Body elongated, about 5.5 times as long as wide. Colour dull yellow in alcohol. Dorsal surface smooth. Cephalon rectangular; anterior border straight. Eyes

mediocre, each eye composed of 80 ommatidia, situated laterally. All the peraeonal somites subequal in length. Coxal plates invisible in dorsal view. Pleon consisting of 2 perfect and a partly indicated fused segments plus pleotelson. Posterior end of pleotelson rather acute.

First antenna (Fig. 9B) composed of 4 segments; 1st segment large and almost square; 2nd and 3rd segments square; terminal segment rectangular with 3 aesthetascs near the tip.

Right mandible (Fig. 9D); pars incisiva composed of 4 teeth; lacinia mobilis not chitinized; processus molaris with a group of long setae. First maxilla (Fig. 9E); outer ramus with 10 teeth at the tip and 2 smaller teeth near the tip. Second maxilla (Fig. 9F); 2 lobes of outer ramus subequal in length and width, each having 3 slightly recurved spines; inner ramus a little longer than the outer one, and having a dozen spines and 2 stout plumose setae.

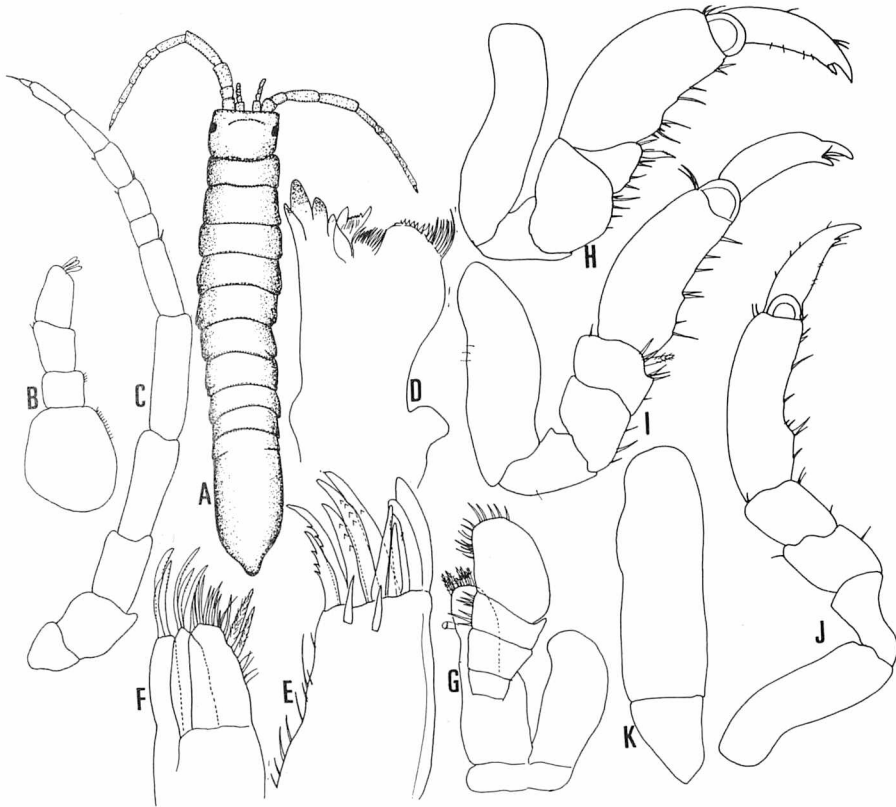


Fig. 9. *Idotea* sp.

A. Dorsal view; B. First antenna; C. Second antenna; D. Right mandible; E. Outer ramus of first maxilla; F. Second maxilla; G. Maxilliped; H. Peraeopod I; I. Peraeopod III; J. Peraeopod VII; K. Uropod (All: female specimen).

Maxilliped (Fig. 9G) ; epipodite ellipsoid ; endite with 8~9 plumose setae on distal margin and a coupling hook on inner margin ; palp wide and 4-segmented ; terminal segment round and big, fringed with 14~15 setae.

Peraeoped I (Fig. 9H) ; basis oblong ; ischium triangular and rather short ; merus round ; carpus short and triangular ; propodus rather short ; dactylus bifid. Peraeopods II-III (Fig. 9I) : basis oblong ; ischium, merus and carpus rectangular ; propodus slenderer than that of the preceding one. Peraeopods IV-VII (Fig. 9J) similar to the preceding 2 peraeopods but a little longer than the preceding 2 peraeopods.

Pleopods in female are not characteristic. Endopod of uropod (Fig. 9K) as figured.

Remarks : The present specimen resembles *Idotea ochotensis* BRANDT, but the former is separated from the latter in the following features : (1) straight margin of cephalon, (2) less distinct epimera of peraeonal somites, (3) more elongated body shape, (4) less numerous segments of flagellum of 2nd antenna and (5) shape of 1st peraeonal somite. But, in addition to that only a single specimen was available to us, this specimen seems to be still young, species name could not be determined.

Material examined : 1 ♀, from floating weeds, off Matsugasaki, Sado, lat. 37°54.3', N ; long. 138°34.0', E, coll. K. IKEHARA *et al*, June 16, 1984.

***Euidotea ocellata* NUNOMURA, 1984**

(Jap. name : Oome-heramushi)

(Fig. 10)

Euidotea ocellata NUNOMURA 1984, Bull. Toyama Sci. Mus, 6 : 65~68. (description).

Remarks : This species was created and described by NUNOMURA (1984), but some incorrect descriptions were made. So we examined some additional specimens and redescribed some parts of the present species.

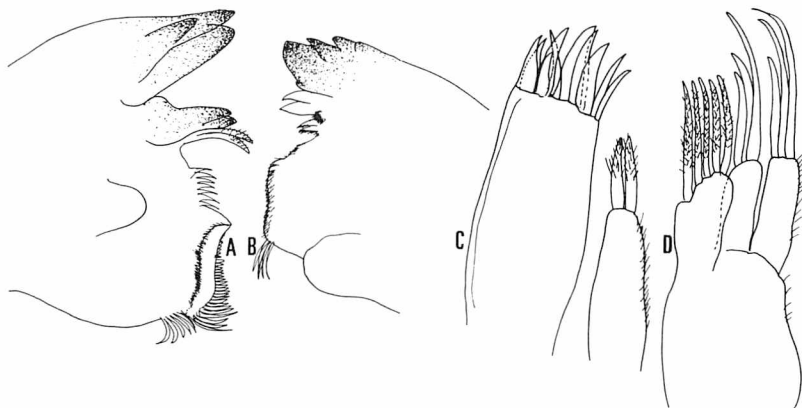


Fig. 10. *Euidotea ocellata* NUNOMURA

A. Left mandible ; B. Right mandible ; C. First maxilla ; D. Second maxilla (All : female specimens from Noto).

The first maxilla, which was incorrectly figured and described in the original description, is again provided (Fig. 10C). Outer ramus with 10 teeth at the tip; inner ramus with 2 circumplumose setae at the tip. In NUNOMURA'S original description (Fig. 1E), the figure of first maxilla was partly mistaken for that of maxilliped. This is the most serious mistake.

The following is the redescription of other parts of mouth of this species. Right mandible (Fig. 10B); pars incisiva 4~5 toothed; lacinia mobilis 2-toothed; processus molaris normal. Left mandible (Fig. 10A); pars incisiva 3-toothed; lacinia mobilis 2-toothed; 2 plumose setae between lacinia mobilis and processus molaris; processus molaris normal. Second maxilla (Fig. 10D); inner ramus with 5 plumose setae; each lobe of outer ramus having 2 setae. Maxillipedal endite bears 6 apical setae.

Cleantiella sp.

(Fig. 11)

Description: Body rectangular, about 4 times as long as wide. Body length 5.2 mm. Colour dull yellow in alcohol. Dorsal surface smooth. Cephalon with acute anterolateral projections and a low medial projection. Eyes rather small, each composed of about 40 ommatidia. Each peraeonal somite subequal in length. Pleon consisting of 3 partly indicated fused pleonites plus pleotelson, which is widening towards the tip, bears a pair of posterolateral acute projections and a round medial projection.

First antenna (Fig. 11B) short, composed of 4 segments; 1st segment big and round; 2nd and 3rd segments rectangular; terminal segments rectangular with 2 aesthetascs at the tip. Second antenna (Fig. 11C), reaching 3rd peraeonal somite, composed of 6 segments; terminal segments club-shaped.

Right mandible (Fig. 11D); pars incisiva 2-toothed; lacinia mobilis not chitinized and single-toothed; processus molaris normal. Left mandible (Fig. 11E); pars incisiva 2-toothed; lacinia mobilis also 2-toothed; processus molaris normal. First maxilla (Fig. 11F); inner ramus with 2 fringed setae; outer ramus with 10 distal teeth. Second maxilla (Fig. 11G); inner ramus with 3 fringed setae; outer lobe of outer ramus with 5 plumose setae; inner lobe of outer ramus with 4 plumose setae at the tip. Maxilliped (Fig. 11H); epipodite ellipsoidal; endite, reaching 2nd palpal segment, bears 5 distal setae and a coupling hook on inner margin.

Peraeopod I (Fig. 11I); basis and ischium elongated; merus almost square; carpus triangular; propodus rectangular with 5~6 setae on inner margin; dactylus rather and bifid. Peraeopods II-VII (Fig. 11 J-N) subequal in shape each other and also resemble peraeopod I, but carpus of the former almost square in shape.

Pleopods in female are not characteristic. Uropod (Fig. 11 O) with a plumose seta at junction of basal and terminal segments.

Remarks: Though this specimen seems to be allied to *Cleantiella strasseni* THIELEMANN distributed in Japan, the former is separated from the latter in the following features: (1) less numerous segmentation of 2nd antenna, (2) shape of posterior part of pleotelson, (3) smaller

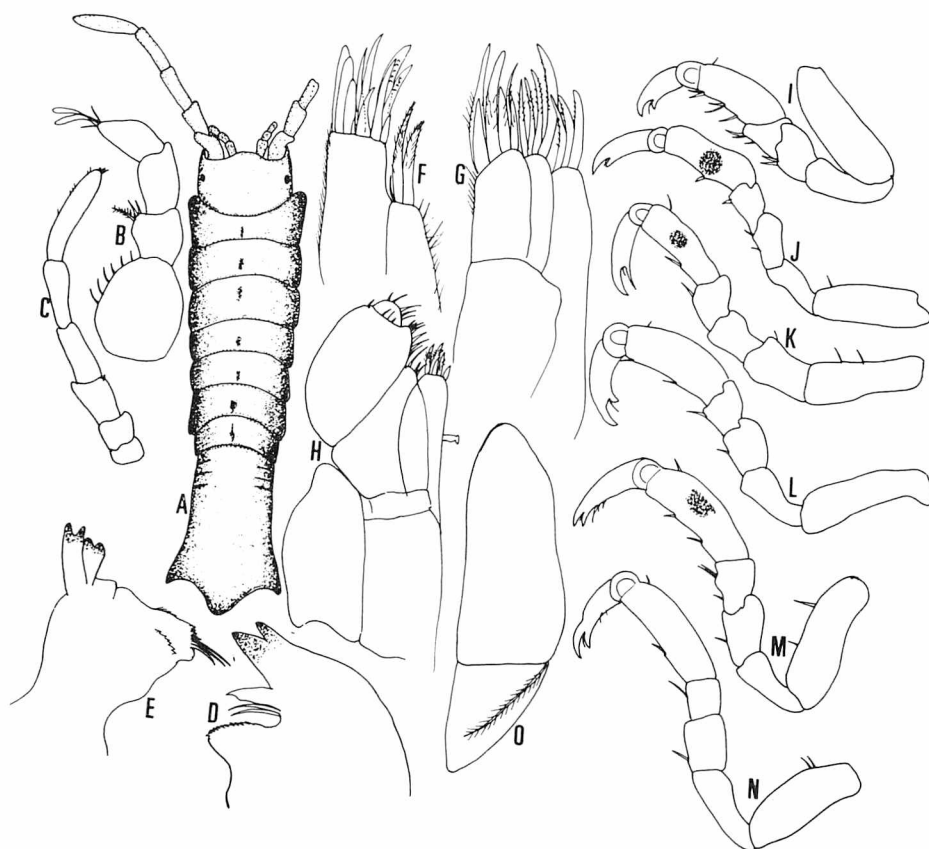


Fig. 11. *Cleantiella* sp.

A. Dorsal view ; B. First antenna ; C. Second antenna ; D. Right mandible ; E. Left mandible ; F. First maxilla ; G. Second maxilla H. Maxilliped ; I -J. Pereopods I-II ; K-N. Pereopods IV-VII (All : female specimen).

eyes, (4) absence of projection on cephalon and (5) shape of maxilliped. But, because not only a single specimen was available to us, but also this specimen seems to be still young stage, species name could not be determined.

Material examined: 1 ♀, from floating weeds, off 9 km of Akadomari, Sado, lat. 38°51.3' N; long. 138°31.0', E, coll. K. IKEHARA *et al.*, June 16, 1984.

References

- BRUCE, N. L., 1980. Cirolanidae (Crustacea: Isopoda) of Australia, Heron Island and the Capricorn Group. *Bull. Mar. Sci.* 30 : 108-130.
- , 1981. The Cirolanidae (Crustacea: Isopoda) of Australia: New species and a new genera from Southeastern Australia. *Rec. Aust. Mus.* 33 (13) : 644-672.

- BRUCE, N. L. and D. A. JONES, 1978. The systematics of some Red Sea Isopod (Family Cirolanidae) with descriptions of two new species. J. zool. London, 185 : 395-413.
- & —————, 1981 The systematics and ecology of some cirolanid isopods from Southern Japan. J. Natur Hist. 15 (1) : 67-85.
- BRUSCA, R. C., 1981. A monograph on the Isopoda Cymothoidae (Crustacea) of the eastern Pacific. Zool. J. Linn. Soc. 73 (2) : 117-199.
- COLLINGE, W. E., 1917. A revision of the British Idoteidae, a family of marine Isopoda. Trans. R. Soc. Edinb. 51 : 721-760.
- HALE, H. M., 1929. The crustaceans of South Australia. Pt. II. Government Printer Adelaide. 201-380.
- HARRISON, K. & D. M. HOLDICH, 1982. Revision of the genera *Dynamenella*, *Ischyromane*, *Dynamenopsis* and *Cymodocella* (Crustacea Isopoda), including a genus and five new species of eubranchiata sphaeromatids from Queensland waters. J. Crust. Biol. 2 (1) : 84-119.
- & —————, 1982 New Eubranchiata Sphaeromatid Isopods from Queensland waters. Mem. Qd. Mus. 20 (3) : 421-446.
- HOLDICH, D. M., K. HARRISON, & N. L. BRUCE., 1981. Cirolanid isopod crustaceans from the Townsville regin of Queensland, Australia, with descriptions of six new species. J. Nat. Hist. 15 : 555-605.
- JONES, D. A., 1969. The genus *Eurydice* (Crustacea : Isopoda) in the Aegian Sea including *E. longispina* sp. nov., Cah. de Biol. Mar. X : 15-29.
- KENSLEY, B. 1984. The Atlantic Barrier Reef Ecosystem of Carrie Bow Cay Balize, III : New Marine Isopoda. Smithsonian Contributions to the Marine Science, No. 24.
- KUSSAKIN, O. G., 1955. On the problem of some systematic aspects *Idothea* FABR. (Isopoda, Valvifera) in the far eastern Sea of USSR. Trud. Zool. Inst. Akad. Nauk. 13 : 219-227 (In Russian).
- , 1979. Marine and brackish water Isopoda of the cold and temperate waters of the Northern Hemisphere, Suborder Flabellifera Opedelitili po Faune SSSR 122 : 1-470 (in Russian).
- NUNOMURA, N., 1981a. Isopod Crustanceans from Sado Island in the Sea of Japan. Ann. Rep. Sado Mar. Biol. Sta., Niigata Univ., 11 : 43-62.
- , 1981b. *Eurydice akiyamai* sp. nov., a New Isopod Crustacean from an Estuary on Chiba Prefecture, Central Japan. Bull. Toyama Sci. Mus., 3 : 7-11.
- , 1984. A new Species of the Valviferan Isopod Genus *Euidotea* from off Noto in the Japan Sea. *Ibid.* 6 : 65-68.
- RICHARDSON, H., 1905. Monograph of the Isopod of North America. Bull. U. S. Nat. Mus. 54 : 1-727.
- , 1909. Isopods collected in the northmost Pacific by the U. S. Bureau of Fisheries Steamer "Albatross" in 1906. Proc. U. S. Nat. Mus. 37 : (1701) : 75-121.

- SCHULTZ, G. A., 1969. How to know the Marine Isopod Crustaceans. W. M. C. Brown, Iowa, 1-359.
- SHIINO, S. M., 1965. New Ill. Encyclopedia of the Fauna of Japan 2 : 541 (in Japanese).
- THIELEMANN, M., 1910. Beiträge zur Kenntnis der Isopodenfauna Ostasiens. Abhandl der Wissenschaften, München, Suppl. Bd. 3 : 1-109.